

GENERAL INDEX



Page		Page	
Acipenser medirostris.....	204, 207	crayfish.....	133
transmontanus.....	204-208	currents, effects on distribution of eggs and larvae.....	1 1-70
<i>Alosa sapidissima</i>	133, 201-203	development, rate of in haddock eggs.....	1 66
ammonia.....	293	dispersal of haddock eggs from spawning areas.....	1 12
<i>Astacus</i>	133	Dyer Island.....	87
<i>Asterias forbesi</i> :		eggs, haddock.....	1 1-70
abundance in Narragansett Bay.....	78	escapement, optimum.....	259
appearance.....	76	eulachon.....	133, 145, 146, 208, 209
damage in Connecticut.....	77	<i>Eusicyonia stimpsoni</i>	60
damage in Narragansett Bay.....	77, 87	fertilizer.....	163, 164
destruction of scallops.....	78	fish, hazards to.....	142, 144, 182, 195, 19
distribution.....	76	life cycle.....	188, 189
<i>tenuer</i>	91	spawning.....	144, 182, 188, 189, 199
<i>vulgaris</i> :		species.....	133, 172, 188, 195-205
distribution.....	76	fisheries, catch.....	195-205
occurrence in Long Island Sound.....	90	history, early.....	139-150
Astor, John Jacob.....	138	income.....	133, 201
Back River.....	101	production.....	133, 195
blueback salmon.....	133, 172, 188, 189, 197-199	profit, annual.....	133, 201
boats, fishing.....	182-187	fishes, Elephant Butte Reservoir.....	300
Brachiolaria.....	105	commercial.....	147-150, 195-203
Buzzards Bay, water temperature.....	86	Indian.....	130-147
calcium hardness.....	291	methods and gear.....	164-187
calcium oxide, effect on starfish.....	127	fish wheel.....	175
cannibalism in starfish.....	110	flood control.....	195
canning, salmon:		fluctuations in abundance of haddock.....	1 1
early history.....	150, 153	fluorides.....	292
machinery.....	153-157	fyke nets.....	142
markets.....	158, 159	Galtsoff, Paul S., and Victor L. Loosanoff: Natural History	
methods.....	153-157	and Method of Controlling the Starfish (<i>Asterias forbesi</i> ,	
pack.....	152, 153	Desor).....	75-132
Cape Charles.....	101	Georges Bank distribution of haddock.....	1 1-70
carbonates.....	289	spawning areas of haddock on.....	1 3
carbon dioxide, effect on starfish.....	126	Gray, Robert.....	137
Cascade Rapids.....	140, 177	habitat.....	188, 189, 199
catch of fish, annual.....	195-205	haddock:	
Celilo Falls.....	140, 146, 147, 174, 175, 177	temperature, relation between rate of development of	
Chesapeake Bay.....	101	haddock eggs.....	1 66
abundance of starfish.....	104	effect of currents on distribution and survival of eggs	
distribution of salinity.....	101	and larvae.....	1 1-70
distribution of starfish.....	102, 103	spawning of.....	1 3
distribution of temperature.....	101	Hapgood.....	150, 153, 154
chinook salmon.....	133, 188, 196, 197	Henry, Alexander.....	137
chlorides.....	292	Hog Island.....	87
chlorine, free, effect on starfish.....	128	hooks, Indian.....	145, 179
chromium salts, effect on starfish.....	128	Hudson's Bay Company.....	138, 149, 159, 191
chum salmon.....	133, 172, 188, 189, 197, 199	Hurne, William.....	150, 151, 153, 165
Clark Fork.....	137	impoundment, Elephant Butte Reservoir.....	257
Clark, George Rogers.....	137, 139	Indian fishing.....	139-147
Columbia River boat.....	183	extent of.....	141, 142, 144
flow.....	137	methods and gear.....	140, 142-147
history.....	137, 138	irrigation.....	194, 195
system.....	136		
tributaries.....	137		
conductivity, specific.....	287		
copper sulphate use in starfish control.....	123-125		
Craig, Joseph A., and Robert L. Hacker: History and			
Development of the Fisheries of the Columbia River. 133-216			

¹ Reference is to Bulletin No. 29.

	Page		Page
Kettle Falls.....	140, 144, 146	parasites of starfish.....	120
Kootenai River.....	137	Pearson, John C.: The early life histories of some American penaeidae, chiefly the commercial shrimp <i>Penaeus setiferus</i> (Linn.).....	1-73
larvae, haddock.....	1-70	<i>Parapenaeus longirostris</i>	3 54
starfish.....	105	Penaeidae.....	1-73
laws, Oregon.....	176, 182	<i>Penaeus brasiliensis</i>	2 30
Washington.....	173, 176, 177, 179, 182	<i>setiferus</i>	2 5
Lewis, Meriwether.....	137, 139	pemmican.....	139, 140
Long Island Sound.....	90	pH.....	286
distribution of starfish according to depth.....	96	phosphates.....	291
salinity of water.....	99	pink salmon.....	139
setting of starfish.....	105-109	Point Comfort.....	101
Loosanoff, Victor L., and Paul S. Galtsoff: Natural History and Method of Controlling the Starfish (<i>Asterias forbesi</i> , Desor).....	75-132	pollution of spawning areas.....	189, 190, 195
McGowan, P. J.....	150	population, human.....	141, 190, 191
McLoughlin, John.....	138	Pritchard.....	278
mining.....	192	production of Columbia River fisheries.....	195-205
Mobjack Bay.....	101	productivity, reservoir.....	257
mollusks, distribution in Long Island Sound.....	98	purse seines.....	181, 182
<i>Mulinia lateralis</i>	103	Reservoir, Elephant Butte.....	257
Nantucket Shoals, distribution of haddock larvae on.....	1 50	salinity of water:	
Narragansett Bay, distribution of starfish.....	88, 89	Buzzards Bay.....	86, 87
net pullers, gypsy.....	186	Chesapeake Bay.....	101, 102, 103
power.....	186	Long Island Sound.....	99
nets.....	140, 142, 145-147, 164-170, 176-179	Narragansett Bay.....	87-89
apron.....	168	<i>Salmo gairdneri</i>	139, 145, 172, 188, 189, 199-201
combination.....	168	salmon:	
dip.....	140, 142, 145, 146, 177-179	blueback.....	133, 172, 188, 189, 197-199
diver.....	166	byproducts.....	163, 164
drift.....	165-170	canned.....	150-159
gill.....	165-170	chinook.....	133, 188, 196, 197
Indian.....	140, 142, 145-147, 177-179	chum.....	133, 172, 188, 189, 197, 199
pound.....	172	cured.....	159-162
trammel.....	167	dried.....	139, 140
set.....	176	fertilizer.....	163, 164
New Mexico, Elephant Butte Dam.....	237	frozen.....	162, 163
Oncorhynchus gorbuscha.....	139	mid-cured.....	160, 162, 198
keta.....	133, 172, 188, 189, 197, 199	oil.....	163, 164
kisutch.....	133, 172, 188, 189, 197, 200	pemmican.....	139, 140
nerka.....	133, 172, 188, 189, 197-199	pink.....	139
tschawytscha.....	133, 139, 172, 188, 196, 197	salted.....	147-150, 158, 160
<i>Orchilophyra stellarum</i>	120	silver.....	133, 172, 188, 189, 197, 200
Oregon State law, fish wheels.....	176	smoked.....	139
purse seines.....	182	species.....	133, 188
<i>Ostrea circum picta</i>	116	Salmon River.....	139
oxygen, dissolved.....	273	sampling stations, Elephant Butte Reservoir.....	260
oyster:		seines, haul:	173
enemies of larvae.....	252	purse.....	181-182
gonad development.....	229, 230, 246, 247, 251, 252	shad.....	133, 201-203
gonad development and temperature.....	246, 247	shrimp, grooved.....	2 30
gonad thickness.....	230	shrimp.....	1-73
food.....	247	shrimp, common.....	2 5
larvae, physiology of.....	253	silver, salmon.....	133, 172, 188, 189, 197, 200
occurrence of larvae.....	232	smelt.....	133, 145, 146, 208, 209
pH—Long Island Sound.....	229	Snake River.....	136, 139, 144, 146, 174, 194
predicting time of spawning and setting.....	251-253	spawning areas.....	188-190
quantity of spawn in different years.....	252	damage to.....	189, 190, 195
salinity—Long Island Sound.....	227-229	pollution of.....	189, 190, 195
set collectors.....	222, 224, 239	spears, Indian.....	144, 145
setting.....	233-240, 250, 253	Spokane River.....	138, 139
setting below 20° C.....	250	stations, buying.....	187
setting in relation to depth.....	238, 239	steelhead trout.....	139, 145, 172, 188, 189, 199-201
spawning.....	230, 231, 247-250	sturgeon.....	133, 204-208
survival of set.....	241, 245	sulphates.....	291
temperature effect on spawning and setting.....	247-250	suction dredge.....	122
temperatures—Long Island Sound.....	224-227, 246, 247-250, 251	starfish:	
oyster spat destruction by starfish.....	119	chemical composition.....	128
		chemotropism.....	118
		control of.....	120, 129, 130
		depth at which found.....	91, 96

¹ Reference is to Bulletin No. 29.² Reference is to Bulletin No. 30.

	Page		Page
starfish—continued		<i>Trachypenaeus constrictus</i>	*39
distribution in Buzzards Bay.....	79, 80, 81, 86	traps:	
distribution in Long Island Sound.....	92-97	Indian basket.....	140, 142, 144
distribution in Narragansett Bay.....	88, 89	modern.....	171-173
feeding.....	116, 117	wooden.....	149, 150, 170-172
food.....	116, 118	trolling.....	179-181
growth in Buzzards Bay.....	84	trout, steelhead.....	139, 145, 172, 188, 189, 199-201
growth in Long Island Sound.....	111	turbidity.....	293
invasion.....	115		
locomotion.....	112		
meal.....	128	Walford, Lionel A.: Effect of currents on distribution and	
migration.....	113	survival of the eggs and larvae of the haddock (<i>Melano-</i>	
mop.....	121	<i>grammus aeglefinus</i>).....	1-73
parasites of.....	120	Walla Walla River.....	143, 145
reproduction.....	104	Washington State law:	
setting of larvae.....	106-109	fish wheels.....	176
sex.....	104	seine nets.....	173
sexual maturity.....	104	set nets.....	177, 179
size and food.....	84	purse seines.....	182
size in Narragansett Bay.....	87	water characteristics, Elephant Butte Reservoir.....	262
spawning.....	104, 105	weirs, Indian.....	142-144
stomach extract.....	116	Wenatchee River.....	139
survival without food.....	110	Wilkes, Capt. Chas.....	140
tagging.....	115	Willamette Falls.....	145
utilization.....	129	Willamette River.....	140, 148
voracity.....	116	Williams, S. W.....	175
temperature, water:		Winship, Abiel and Jonathan.....	137
Buzzards Bay.....	80-87	Yakima River.....	139
Chesapeake Bay.....	101, 102, 103	York Spit Light.....	101
Long Island Sound.....	99		
Narragansett Bay.....	87-89	zinc sulphate, effect on starfish.....	126
<i>Thaleichthys pacificus</i>	133, 145, 146, 208, 209	zooplankton.....	261
Thompson, David.....	138, 139		
towhead.....	167		

¹ Reference is to Bulletin No. 29.² Reference is to Bulletin No. 30.